

**REMARKS**

Upon entry of the instant Amendment, claims **1-21** will be pending. By this Amendment, the specification is amended and claim 21 is added for the Examiner's consideration. Support for new claim 1 can be found in pending claim 1 and paragraphs [0013] and [0014] of the instant published application US 2002/0101985. Reconsideration and timely withdrawal of the pending rejections are requested for the reasons discussed below.

***Examiner Suggested Claim Amendments***

On pages 3 and 4 of the instant non-final Office Action, the Examiner suggests possible changes to claim 1 (as well as claims 16 and 19) which would render the claims allowable over the applied art of record. While Applicant appreciates the Examiner's assistance in this regard, Applicant submits that the proposed are not required to define the invention over the applied documents, and have not been shown by the Examiner to be necessary in order to define the invention over the applied documents. However, as Applicant has adopted some of the proposed changes in formulating claim 21, Applicant requests that the Examiner indicate that this new claim is allowable over the applied art of record.

***Objection to the Disclosure***

The Examiner objected to the disclosure because paragraph [0008] of the

published application does not correctly identify FIPS PUB 46-3, because it describes this document as reaffirmed, and because it describes this document as consisting of 64 bits.

By this Amendment, Applicant has changed publication number FIPS PUB 463 to FIPS PUB 46-3 and deleted the "reaffirmed" language as requested by the Examiner. However, with regard to the latter requirement, Applicant submits that such changes are not required by any USPTO rule and because this document does in fact discuss a 64-bit key.

Accordingly, Applicant request that the above-noted objection be withdrawn.

### ***Objection to the Drawings***

The Examiner objected to the drawings because the specification does not describe Figs. 1 and 2 as Figs. 1A, 1B, 2A and 2B is shown in the drawings. The Examiner also objects to the drawings as not showing reference numbers 101 and 201-203.

By this Amendment, Applicant has changed "Brief Description of the Drawings" section to correctly list the figures numbers of the drawings.

With regard to reference numbers 101 and 201-203 not being shown, Applicant submits that the Examiner is not correct. Fig. 1A shows reference number 101 in the top left side of the drawing sheet. Fig. 2B shows reference numbers 201-203 in the bottom left side of the drawing sheet.

Accordingly, Applicant request that the above-noted objection be withdrawn.

**35 U.S.C. § 102(e) Rejection**

Claims 1-4 and 9-20 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,704,871 to KAPLAN et al. Applicant respectfully traverses this rejection.

The Examiner asserted that KAPLAN discloses all the features recited in these claims including, among other features, a combinational logic comprising logic functions whose outputs depend solely on their inputs and utilizing logic circuits without memory.

Applicant respectfully disagrees. Notwithstanding the Office Action assertions as to what KAPLAN discloses, Applicant submits that KAPLAN fails to disclose, or even suggest at least the features of claims 1, 16 and 19.

In particular, independent claims 1, 16 and 19 recite:

... the combinational logic comprising logic functions whose outputs depend solely on their inputs and utilizing logic circuits without memory.

Applicant does not dispute that KAPLAN discloses a cryptographic co-processor having cryptographic function elements (see Abstract). However, the Examiner is not correct that KAPLAN teaches a combinational logic comprising logic functions whose outputs depend solely on their inputs and utilizing logic circuits without memory.

While the Examiner has identified col. 10, lines 26-44 of KAPLAN as teaching this feature, this language merely states the following:

The Secure Hash Block is tightly coupled with the Encrypt Block and provides hardware accelerated one-way Hash functions. Both the MD-5 and SHAD-1 algorithms are supported. Combined operations which chain both Hashing and Encrypt/Decrypt functions are provided in order to significantly reduce the processing time for data which needs both operations applied. For Hash-then-Encrypt and Hash-then-Decrypt operations, the CryptIC can perform parallel

execution of both functions from the same source and destination buffers. For Encrypt-then-Hash and Decrypt-then-Hash operations, the processing must be sequential, however minimum latency is still provided through the pipeline chaining design. An Offset may be specified between the start of Hashing and the start of Encryption to support certain protocols such as IPsec, and 'Mutable bit' handling is provided in hardware.

While such language discusses parallel execution and sequential processing of Encrypt-then-Hash and Decrypt-then-Hash operations, such language is silent with regard to a combinational logic comprising logic functions whose outputs depend solely on their inputs and utilizing logic circuits without memory. (claims 1, 16 and 19).

The Examiner explains on page 2 of the instant Office Action that certain language in KAPLAN teaching "hardware accelerated" has "the same meaning as" as the recited logic circuits without memory and on page 6 of the Office Action that "combined operations that operate in parallel off of the same source" can be interpreted as the recited combinational logic comprising logic functions whose outputs depend solely on their inputs. Applicant submits that this is improper. The "broadest reasonable interpretation" standard must be one that "would be understood by one of ordinary skill in the art, taking into consideration the description of the applicant's specification. *In re Morris*, 127 F.3D 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997)". See page 3 of the attached non-precedential decision *Ex parte HADDAD*. Since Applicant has clearly recited a combinational logic comprising logic functions whose outputs depend solely on their inputs and utilizing logic circuits without memory and consistently agued that the claims

do not encompass the disclosed features of KAPLAN, the Examiner cannot, consistent with *In re Morris*, properly construe these clearly recited features in a manner which is clearly inconsistent with and/or outside the scope of Applicant's specification. At the very least, the Examiner should explain which language in Applicant's specification supports the Examiner's assertion that "hardware accelerated" is encompassed by the recited logic circuits without memory and which language in Applicant's specification supports the Examiner's assertion that "combined operations that operate in parallel off of the same source" is encompassed by the recited combinational logic comprising logic functions whose outputs depend solely on their inputs.

Furthermore, to the extent that the Examiner is basing the instant rejection on an argument of inherency consistent with MPEP 2112, Applicant notes that MPEP 2112 specifically states, in part:

"In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original) (Applicant's invention was directed to a biaxially oriented, flexible dilation catheter balloon (a tube which expands upon inflation) used, for example, in clearing the blood vessels of heart patients). The examiner applied a U.S. patent to Schjeldahl which disclosed injection molding a tubular preform and then injecting air into the preform to expand it against a mold (blow molding). The reference did not directly state that the end product balloon was biaxially oriented. It did disclose that the balloon was "formed from a thin flexible inelastic, high tensile strength, biaxially oriented synthetic plastic material." *Id.* at 1462 (emphasis in original). The examiner argued that Schjeldahl's balloon was inherently biaxially oriented. The Board reversed on the basis that the examiner

did not provide objective evidence or cogent technical reasoning to support the conclusion of inherency.).

The Examiner has neither stated that the rejection is based on inherency, nor provided any basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.

Thus, Applicant submits that independent claims 1, 16 and 19 are not anticipated by any proper reading of KAPLAN. Furthermore, Applicant submits that dependent claims 2-4, 9-15, 17, 18 and 20 are allowable at least for the reason that these claims depend from allowable base claims and because these claims recite additional features that further define the present invention.

Applicant requests that the Examiner reconsider and withdraw the rejection of the above-noted claims under 35 U.S.C. § 102(e).

### ***35 U.S.C. § 103 Rejection***

Claims 5-8 were rejected under 35 U.S.C. § 103(a) for being allegedly unpatentable over KAPLAN in view of US Patent No. 6,870,929 to GREENE. This rejection is respectfully traversed.

The Examiner acknowledges that KAPLAN fails to disclose, among other things, the features recited in the above-noted dependent claims. However, the Examiner explains that such features are taught in GREENE, and that it would have been obvious

to combine the teachings of these documents. Applicant respectfully submits that a *prima facie* case of obviousness has not been established as the applied references fail to teach each and every element of the claims.

In addition to the arguments noted above regarding KAPLAN, Applicant submits that this rejection is improper at least because GREENE fails to cure the deficiencies of KAPLAN. Applicant submits, for example, that even if the Examiner could properly argue that the whole circuit of Fig. 1 of GREENE equates to the recited combinational logic, the Examiner has not explained how this circuit performs computation iterations of the crypto-function on data stored in the first register and outputs data to said second register in a single hardware cycle.

As GREENE and KAPLAN fail to disclose or suggest at least the features of claim 1, no proper combination of these documents can possibly render dependent claims 5-8 unpatentable.

Accordingly, Applicant requests that the Examiner reconsider and withdraw the above-noted rejection under 35 U.S.C. § 103(a) and indicate that these claims are allowable over the applied art of record.

### CONCLUSION

In view of the foregoing remarks, Applicant submits that all of the claims are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is invited to contact the undersigned at the telephone number listed below, if

P27325.A16

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needed. Please charge any deficiencies in fees and credit any overpayment of fees to

**IBM Deposit Account 50-0563.**

Respectfully submitted,  
J. L. CALVIGNAC et al.

A handwritten signature in black ink, appearing to read "Andrew M. Calderon", written over a horizontal dashed line.

Andrew M. Calderon  
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November 20, 2007  
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The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.

Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte NADIM HADDAD, CHARLES N. ALCORN,  
JONATHAN MAIMON, LEONARD R. ROCKETT  
and SCOTT DOYLE

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Appeal No. 2003-2013  
Application No. 09/491,230

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ON BRIEF

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Before KIMLIN, JEFFREY T. SMITH and PAWLIKOWSKI, Administrative  
Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 6-19.

Claim 6 is illustrative:

6. A resistor, comprising:

a first passivation layer overlying a semiconductor  
substrate having a plurality of transistors;

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a first bottom contact and a second bottom contact formed through said first passivation layer at a first contact location and a second contact location, respectively;

a resistive film formed over said first passivation layer to serve as a resistor, wherein said resistive film has a first end and a second end;

a first top contact connecting said first bottom contact to said first end of said resistive film; and

a second top contact connecting said second bottom contact to said second end of said resistive film.

In the rejection of the appealed claims, the examiner relies upon the following reference:

Matthews	5,182,225	Jan. 26, 1993
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Appellants' claimed invention is directed to a resistor wherein first and second top contacts connect first and second bottom contacts to first and second ends of a resistive film.

Appealed claims 6, 7, 11, 12 and 16-19 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Matthews. Claims 8-10 and 13-15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Matthews.

We have thoroughly reviewed the respective positions advanced by appellants and the examiner. In so doing, we concur with appellants that the prior art cited by the examiner neither describes the claimed invention within the meaning of § 102 nor

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renders it obvious within the meaning of § 103. Accordingly, we will not sustain the examiner's rejections.

The basis of the examiner's rejections over Matthews is finding that the gate and source regions of Matthews meet the requirements for the claimed first and second bottom contacts, respectively. In other words, it is the examiner's position that the gate and source of Matthews are contacts which meet the requirements of the presently claimed first and second bottom contacts. Appellants, on the other hand, contend that when one of ordinary skill in the art interprets the claim language in light of the specification, such a skilled artisan would not read the first and second bottom contacts as including the gate and source regions of Matthews.

We must acknowledge that there is a certain appeal in the examiner's position. Manifestly, the source and gate of Matthews are made of a conductive material and serve to pass current from one body to another, as urged by the examiner. However, it is well settled that claim language is given its broadest reasonable meaning during prosecution as it would be understood by one of ordinary skill in the art, taking into consideration the description of the applicant's specification. In re Morris,

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127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997).

In the present case, appellants' specification describes that the contacts, or studs, are made from tungsten, aluminum, or copper, and the specification also discloses other areas of the device as gate and source regions (14a, 14b and 17a, 17b, respectively).

Hence, we find it reasonable to conclude that one of ordinary skill in the art would not interpret the claimed first and second bottom contacts as inclusive of gate and source regions and, therefore, it is our opinion that the gate and source regions of Matthews are not a description of the claimed bottom contacts within the meaning of § 102. In our view, appellants' arguments during prosecution establish, via file wrapper estoppel, that the claimed first and second bottom contacts do not encompass gate and source regions.

As for the examiner's § 103 rejection, the examiner has not presented a rationale why it would have been obvious for one of ordinary skill in the art to modify Matthews to incorporate the claimed first and second bottom contacts in addition to the gate and source regions.

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In conclusion, based on the foregoing, the examiner's  
decision rejecting the appealed claims is reversed.

REVERSED

EDWARD C. KIMLIN	)	
Administrative Patent Judge	)	
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	)	
	)	
	)	
JEFFREY T. SMITH	)	BOARD OF PATENT
Administrative Patent Judge	)	APPEALS AND
	)	INTERFERENCES
	)	
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	)	
BEVERLY PAWLIKOWSKI	)	
Administrative Patent Judge	)	

ECK:clm

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